

## Historical Lesson: Grade 7

### A.T. Still, Respiratory System and Asthma

#### Objectives:

- Students will connect previously learned information about the respiratory system to asthma by conducting an experiment relating to asthma.
- Students will research asthma, asthma treatments, and A.T. Still's treatment for asthma and report their findings to the class.
- Students will read about A.T. Still and explain both his significance impact in history and his treatment for asthma.

#### Materials:

- Tape
- Toothpicks
- Straws
- Internet access

#### Vocabulary:

Asthma- the result of narrowing, inflammation or mucus plugging of the bronchioles and bronchi.

A.T. Still

Trachea

Bronchi (airway passages)

Bronchioles

Alveoli

Respiratory system

#### Web Resources:

[http://kidshealth.org/parent/medical/lungs/asthma\\_basics.html](http://kidshealth.org/parent/medical/lungs/asthma_basics.html)

<http://en.wikipedia.org/wiki/Asthma>

#### Engage:

Quickly let students find a partner. Each group is to review the information they learned about the respiratory system in previous lessons. Students must draw the lungs and label each of the following parts: nose, mouth, trachea, bronchioles, and alveoli. Upon completion of each pair's drawings, have each pair get together with another pair and compare their drawings and make changes if necessary. Ask for a group to come and put their drawing on the board. Discuss.

#### Explore:

Have each student breathe normally for 30 seconds. Discuss and have each student record how they feel? Next, give each student a straw. Again have the students breathe through the straw for 30 seconds. Discuss and have each student record how they feel? Now have the students cover the end of the straw with a piece of tape and poke a few holes through the end with a toothpick. Again breathe through the straw for 30 seconds. Discuss and have each student record how they feel.

Discuss how this relates to asthma.

Breathing normally is what it is like to not have asthma.

Breathing through the straw is similar to when the bronchioles constrict and it is hard to breath.

Covering the end and poking holes through the end might be what it feels like for someone to have constricted airways and airways that are filled with mucus.

Discuss what it must feel like to have asthma. Encourage open discussions.

**Explain:**

Have all the students read the first section of the following information about asthma on the Kids Health website: [http://kidshealth.org/kid/health\\_problems/allergy/asthma.html](http://kidshealth.org/kid/health_problems/allergy/asthma.html)

Then organize the students in groups and assign them each a topic from the website. The following main topics are in bold letters on the website:

**Who Gets Asthma,**

**What Causes an Asthma Flare-Up,**

**How is Asthma Treated,**

**Space Out With a Spacer.**

There are only 4 topics so you may need to have two groups read and research each topic.

Have each group read the introduction on the page as well as their assigned section.

Assign them the task of finding at least three additional web resources and additional information that explains in more detail their portion. Student groups must not only present the information they read on the assigned website but present three additional valuable resources that expand on their topic. The groups must provide the class with a 5 minute presentation and share the web resources they used.

Have each group present. Encourage students to take notes.

After the presentations have each group prepare 3 test questions for the class from their presented information. Collect the questions for the evaluation portion of the lesson.

**Expand:**

Assign as Homework:

1. Read what Osteopathy is on the following website...  
[http://en.wikipedia.org/wiki/Doctor\\_of\\_Osteopathy](http://en.wikipedia.org/wiki/Doctor_of_Osteopathy)  
Assign students the task of summarizing what they read in one paragraph.
2. Read about A.T. Still on the following website.  
<http://www.atsu.edu/museum/ats/index.htm>  
Assign students the task of summarizing what they read in one paragraph.
3. Make connections between Osteopathy and A.T. Still. Write a paragraph about the significance of A.T. Still and Osteopathy.

4. Read about Asthma and Osteopathy  
Research online. (You may choose to direct students to specific websites or assign them the task of finding three websites on their own.  
Assign students the task of summarizing the information they found and site their sources.  
Suggested website to visit...  
<http://www.mulberryosteopath.co.uk/Asthma.html>
5. Make Connections. Comprehensive question: Explain how A.T. Still's theories may impact an asthma patient today.

Upon completion of the above tasks, put students in groups of 4. Have students discuss their questions and the information they found. Walk around and join student groups. You may choose to grade group discussions and participation. You may also choose to have the students grade each other. For example, each individual will give the other members of their group 1-5 points based on their participation.

**Evaluate:**

Prepare a test using the students test questions. Add additional questions if necessary. You may choose to let students use the notes they took during the presentations or take the test without their notes.

Collect the student's information from the Expand portion of the lesson.